MONEY AND PRICES

BY WALTER F. FORD

Everyone knows that the prices of all marketable goods depend upon a nice adjustment of supply on the one hand and demand on the other hand. In peace times the heads of great commercial houses were much worried by problems of over-production; and it was one of the fine arts of business on the grand scale to determine to what extent it was more remunerative to get rid of part of a stock of goods by selling abroad at cost price, or even less than cost price, than to damage the home market by throwing on it more merchandise than it could comfortably absorb. But the war has forced home the lesson that there is a definite limit to production. In these abnormal times, even an ideal combination of available natural resources, capital and labor would yield inadequate results. We are accustomed to talk about the equation of supply to demand; but we now find that demand has an elasticity which enormously transcends that of supply. Human wants are never satisfied and the desire to purchase is practically illimitable. As Emerson says, " Nature urges man to the acquisition of such things as belong to him. Every warehouse and shop window, every fruit tree, every thought of every hour, opens a new want to him, which it concerns his power and dignity to gratify. It is of no use to argue the wants down. Wealth requires, besides the crust of bread and the roof, the freedom of the city, the freedom of the earth, traveling, machinery, the benefits of science, music, and fine arts, the best culture and the best company." There are far more potential spendthrifts in the world than there are misers; and at all times—during peace or war—the great mass of the people restrict their demand for goods not at the point at which their wants are satiated but at the point at which their means are exhausted. There are, of course, innumerable people who do not wish immediately to exercise

to its fullest extent the purchasing powers which the control of money gives them; but the modern banking system has the effect of readily transferring this power to others who can, and do, exercise it at once. In the case of a highly developed community every addition to its purchasing power is immediately translated into effective demand, and, therefore, demand and purchasing power are interchangeable terms. Instead of saying that general prices depend upon supply and demand, we might, with equal truth, say that they depend upon supply and purchasing power. Each step in the direction of making it easier for the public to acquire the control of money must, therefore, force prices upwards unless the extra demand, as expressed by additional purchasing power, be accompanied by an equivalent increase of supply.

In the nineteenth century, Political Economy was regarded as a science of which the leading laws were fixed for all time; but, now, it is rightly held to be merely a collection of political and business principles which are qualified by varying circumstances. In the days of the older economists it was asserted that prices were governed by the amount of money in circulation. The assertion is perfectly true in theory. It implies a balancing of the two forces of supply, as represented by the output of goods, and demand, as denoted by purchasing power. But, quite obviously, the balance may be upset by a radical alteration of output, such as occurs when production is greatly increased, or by a marked alteration in the rapidity with which money can be circulated. The quantity theory of money is essentially a principle of Political Economy which is in no sense a fixed law but which nevertheless always contains the germs of truth. It is one of those principles which each generation ought to study for itself and to apply to its own problems in forms modified to meet prevailing conditions. And never has this particular problem assumed such enormous importance as it has now. With the exception of America, all the countries involved in the war have added largely to their currencies by means of paper money which is inconvertible in fact if not in name. In the countries of issue this paper money ranks *pari passu* with gold and has the same effect upon prices as the addition to the currency of an equivalent amount of actual coin.

The extension and development of the modern banking system led to the creation of vast masses of credit of which the volume is many times greater than that of the actual cur-

rency. There is, therefore, some foundation for the position taken up by the modern business man who brushes aside the quantity theory of money by means of the stock argument that as credit greatly exceeds the coinage in volume, and is moreover capable of enormous expansion and contraction, its power as a determinant of price is so much greater than that of gold that, by comparison, the latter becomes almost negligible. This argument had obtained so strong a hold upon every section of the community that, even before the outbreak of war, the quantity theory had become sufficiently out of touch with modern conditions to be regarded as practically obsolete. Few real attempts have ever been made to bring it up to date, and, certainly, no official effort was made to test its applicability to the conditions which the issue of large quantities of inconvertible paper money would necessarily create. Yet, since it is part of the business creed that nothing increases spending power and, therefore, the demand for goods so effectively as additional facilities for obtaining credit, one might reasonably have supposed that the possibility of large issues of paper money having a considerable effect upon credit would have been the subject of most careful enquiry.

The broad general policy adopted by banks is not arbitrarily settled at directors' board meetings. It is governed by definite rules which must be observed if, on the one hand, a profit is to be made and, on the other hand, disastrous over-speculation is to be avoided. No one borrows money from a banker with the object of hoarding it. Immediately anyone obtains a loan he puts the money into circulation, and the person who receives it promptly pays it into his own bank. It may not be the same bank as the one which advanced the loan to the original borrower, but, whether it is or not, the net result is that the aggregate amount of cash in the hands of bankers remains the same. Generally, the transactions are made by means of cheques or drafts, and, in that case, the money does not leave, even temporarily, the coffers of the banks. All that happens is that bankers' assets and liabilities are both increased by the amount of the loan. Since bankers have, in the aggregate, the same cash in hand that they had before they advanced the loan, it is quite obvious that they can repeat the process again and again and make a substantial profit on each transaction. But as the cash in hand remains approximately stationary, each transaction reduces

its proportion to liabilities. Banking experience has shown that it is not safe to allow the proportion to fall below a certain level. That level marks a danger point. When it is reached, bankers are compelled to stop creating credit. Consequently, there is a definite limit beyond which credit cannot expand, and it is automatically fixed by the amount of cash which is held by the banks. The nearer banks can keep to that limit the greater are their profits, and naturally, therefore, they try to keep as close as possible to it. On the other hand, if they lend money sparingly the proportion of cash to liabilities is very high. This would appear to indicate a sound financial position; but it would really mean that the banks were doing very little business. Their profits would be low, and if the proportion of cash to liabilities exceeded a certain percentage banking would cease to be profitable. This percentage marks the second, or upper, danger point: it is dependent in every bank upon the cost of upkeep. Clearly, therefore, the instinct of self-preservation will compel banks to create credit in sufficient quantity to ensure the proportion of cash to liabilities always standing below the second danger point. Accordingly, it may be laid down as a working rule that the credit created by banks must not rise beyond or fall below amounts which bear definite proportions to the cash which they hold. It may oscillate between those two limits, but it cannot pass beyond either.

It was an American writer who first illustrated the capacity to build up credit by the analogy of sand piled up on a round disk. The disk represents the metallic, or the metallic and note currency, and credit the amount of sand that can be piled on it. As the area of the disk increases, so also does the amount of sand which it will support. In exactly the same way, the amount of credit which the banks can superimpose on the cash held by them bears a definite relationship to the amount of that cash. The great bulk of a nation's money is stored in its banks. Individuals carry about with them no more than will provide for their immediate personal requirements, and it is the common practice of business men to set limits to the quantity of coin or notes which they retain in their safes or tills. Any surplus belonging either to private individuals or to business firms is either paid into the banks or hoarded; and the more highly the business instincts of the people are developed, the rarer is the tendency to hoard. The immediate personal requirements of a very large

community do not, in the aggregate, vary greatly from day to day, and, therefore, the amount of national loose cash remains fairly constant. If there be an increase in the quantity of money in circulation, practically the whole of it in countries like America or England is at once transferred to the banks; and, if there be a decrease, it is from the banks that the withdrawal is made. No matter what amount of money a highly developed commercial nation may possess, a sum which changes so little from week to week that it may be regarded as a non-variable has to be allocated for use as loose cash and whatever is left over is stored in the banks. It follows, therefore, that every addition to or decrease of the coinage alters the amount of cash in the hands of bankers and so moves up or down the limits within which credit can be created. Ability to obtain credit is synonymous with purchasing power, and human nature is such that purchasing power is invariably translated into effective demand for goods. This brings us to the obvious conclusion that every alteration in the quantity of money in circulation immediately affects the cash reserves of banks, hence credit and so purchasing power: the latter becomes demand, and it is upon the relationship of demand to supply that general prices depend. Eliminate the intermediates and we come back to the theory which for the last fifty or sixty years has been sinking deeper and deeper into oblivion that prices do ultimately depend upon the relationship of the quantity of money in circulation to the supply of marketable goods. In essentials the theory is sound, but it will always need to be modified to suit the conditions prevailing at any given epoch.

Until war broke out in August, 1914, the European nations which were then immediately affected had gone on steadily perfecting their financial arrangements. Their bankers had learned by experience exactly what proportion cash reserves ought to bear to liabilities; and, with an eye to maximum profits, they had become accustomed to multiply their transactions until their cash reserves were at the lowest point which experience had taught them to be safe. They were, in fact, in the habit of piling up all the credit their currency disks could be made to carry with safety. But, immediately war was declared, public confidence was shaken. The currency disks were tilted to an awkward angle; and it at once became evident that, unless their areas could be extended very quickly indeed, much of the credit which was

built up on them would be spilled. The several governments were compelled to come to the rescue of the banks. By means of paper money, the currency disks were so increased in size that they became capable of supporting as much credit when lying at an angle of several degrees as the old but smaller disks had carried in a horizontal position. When, however, the first shock was over, the new and enlarged disks settled into level positions. Public confidence in the safety of the banks had by then been very largely restored, and bankers were able to lend almost as freely as they had done before the war. They did not hesitate to do so, and credit expanded, not on the basis of the former gold currencies, but on the basis of the new and enlarged combined gold and note currencies. Naturally credit, purchasing power, and demand were all much greater than they had been before the war; and nothing but an increase of supply to correspond with the increase of demand could possibly have prevented general prices from going up.

All the belligerent countries in Europe have enormously augmented their currencies by the issue of inconvertible paper money, and have, therefore, increased the spending capacity of their people. But it would be useless to try to compare the statistical returns without some knowledge, not only of the methods of bankers in each country, but also of the political psychology of the different races. England has issued paper money to the extent of 900,000,000 dollars, Germany's issues amount to over 2,500,000,000, France's to more than 3,500,000,000 and Russia's to about 7,500,000,000.[1] But England and Germany each have very highly developed banking systems, and the habit of hoarding scarcely exists. In England, bankers maintain their cash reserves at approximately 20 per cent. of their liabilities. 900,000,000 dollars of additional money would, therefore, increase the cash-cum-credit circulating medium by about 4,500,000,000 dollars. In Germany 2,500,000,000 dollars of new money would increase the total circulating medium by at least 12,500,000,000 dollars. In France, on the other hand, bank credits are far less freely created, and the practice of individual hoarding has by no means been eliminated. New money put into circulation in France does not, therefore, increase the cash-cum-credit circulating medium to anything like the same extent that it does in either England or Germany. No

[1] The amounts quoted cover the period to the end of 1917.

important nation which trades freely with others can tamper with its circulating medium without affecting currencies, and, consequently, prices everywhere. National currencies are comparable to a series of reservoirs connected with one another by pipes. Water poured into any one of a series of connected reservoirs is very quickly distributed among the several others in proportion to their base areas. In exactly the same way, each issue of paper money immediately raises the level of the currency reservoir of the issuing country: gold at once begins to flow out through the connecting pipes and continues to do so until all the reservoirs have again been brought to a common level. That, precisely, is what has happened in regard to the world's currencies.

At the beginning of the war, it was necessary for the countries which acutely felt the financial shock to issue sufficient inconvertible paper money to replace much of the credit which had suddenly dried up; but as soon as public confidence was restored it became clear that credit was being freely built up on the new money as well as on the old, and evidence of currency inflation appeared everywhere. One is justified in asking why the restoration of public confidence was not made the occasion for the withdrawal of inconvertible paper issues. The answer to this question is, however, fairly obvious, and it also affords an explanation of the policy of continuing to issue fresh paper money, despite the manifest arguments against it. Before the war had been many days in progress, all the belligerent nations had to commence borrowing. The larger the quantity of money in circulation the greater are the facilities to obtain credit, and, therefore, the greater the capacity of the public to take up government loans. Provided that it can depend upon the patriotism of the people, any stable and responsible Government can be certain of obtaining the amount of an internal loan if the people have control of sufficient cash and credit to enable them to take it up. And any Government can always make sure that the people have control of a sum of money adequate to its purpose by adopting the simple expedient of issuing enough paper money to broaden the currency disk to the required extent. By issuing 900,000,000 dollars' worth of Treasury notes the British Government not only borrowed that sum without interest, but, through the instrumentality of the banks, it increased by something like 4,500,000,000 dollars the capacity of the British people to lend to it. The

French people are far more inclined to hoard money than the British, and it is partly for this reason and partly because the banking system is less highly developed in France than it is in England that, in order to give to the French nation sufficient control of money to enable them to take up the several loans which it has placed on the market, the French Government has had to issue far more inconvertible paper money than the British Government had to issue in order to put in the hands of the people of the United Kingdom control of enough money to enable them to take up the larger loans issued in England. If any doubt arises as to a nation's stability, the credit which can be created upon the basis of a definite amount of cash is immediately reduced; and when that happens a Government can only prevent a decrease of the cash-cum-credit circulating medium by largely increasing the amount of its note issues. So long as the Czar was firmly seated on his throne, the notes issued by Russia, which were unsecured by a gold backing, were kept within reasonable bounds. At the time of the Revolution they amounted to about 2,500,000,000 dollars. From that time to just before the fall of Kerensky they had increased to 7,500,000,000 dollars. During the interval, however, the lending capacity of the Russian people had substantially diminished; and, therefore, the whole of the 5,000,000,000 dollars of extra money must have been absorbed to replace part of the credit which had vanished from the Russian cash-cum-credit circulating medium as a result of loss of confidence in the Government.

Questions are often raised as to the capacity of Germany to float internal loans. When the German Government wants to raise a loan all that it has to do is to put into circulation a quantity of paper money. On this will be erected a mass of bank credit: the public control of money will be largely added to; and, provided that the German people are willing to lend to their Government—as they unquestionably still are—a loan can readily be raised. Germany has already borrowed over 80,000,000,000 marks; and she can go on raising loans so long as she is prepared to increase her cash-cum-credit circulation by anticipatory issues of paper money, provided always that she can rely on her people to lend to her the additional money thus brought under their control. Naturally, however, the greater the quantity of new paper money added to the currency the smaller will be the real

purchasing power of the mark: the sooner, therefore, will the amount borrowed be spent and the necessity for repeating the process arise. Each repetition shortens the time that any given amount will last and accelerates the rate at which national debt is accumulated. To finance on these lines is to weave a web of bankruptcy. It is a national adoption of the methods of the spendthrift who pays off debts to successive money-lenders by obtaining advances from others on more and more exorbitant terms. At each stage it becomes increasingly difficult for the borrower to extricate himself, and there is always a point beyond which he cannot go without becoming bankrupt. Any progress beyond that point defers the inevitable crash, but increases its intensity when it can no longer be postponed. Germany is in a similar state. She may not yet have got to the point of bankruptcy, but every fresh issue of paper money is hastening the pace at which she is traveling towards it. Even when she has passed the bankruptcy point, she will be able to continue her financial methods so long as the German people are prepared to tolerate them. Her insolvency will not be publicly disclosed until her methods are discarded, but it is certain that the longer they are persisted in the greater will be the crash when it does come. Austria is similarly situated, but there are indications that the Government of the dual Monarchy realizes the position, for a propaganda has already been started against the further issue of unsecured bank notes.

Of all the great countries involved in the war, America alone has not had recourse to inconvertible paper money, but her currency has nevertheless been swollen to almost as great an extent as that of Great Britain, which, of all the Allies in Europe, has placed the greatest restraint upon the issue of paper money. It would have been impossible for America to carry on trade with countries where currency was inflated and prices rising without accumulating favorable trade balances which her debtors had to liquidate in gold. Currency inflation inevitably leads to high commodity prices. When inflation is unavoidable it is of course very much better for it to be in the form of gold than notes; but, from the national point of view, it is still better to be without it. If for every article I use I have to pay twice as much now as I had to pay before the war, my new financial position depends upon whether or not my income has been doubled. Any general increase of prices which results solely from world-wide cur-

rency inflation does not in any way affect the quantity or quality of commodities. National wealth remains the same and, theoretically, everyone's income, in terms of money, should expand to keep pace with augmented prices. In actual practice, however, there is always an alteration in the distribution of purchasing power in which the weak suffer at the expense of the strong. In the present state of public opinion it is almost heresy to suggest the wholesale export of gold, but I venture to think that it would be an excellent stroke of business for America to lend her surplus stock to her Allies in Europe to be used by them in cancelling a part of their inconvertible note issues. An immediate effect would be a wholesale reduction of prices in the United States; and, while the expenses of production would be lessened, exported goods would continue to be sold at the higher prices prevailing in Europe. There could be no possible danger of the stock of gold in America being unduly depleted. The difficulty would rather be to keep it down; for gold would all the time be tending to come back in payment for the trade balances which would be constantly accumulating.

Most apologists for the prevailing high cost of living attribute it almost entirely to limitation of supply. That may be true of particular localities, but it is not true of the world at large. Just as demand means purchasing power irrespective of the manner in which it is exercised, so also supply means the sum of all articles offered for sale, or, perhaps, in view of the activities of German submarines, it would be more correct to define supply as the sum of all articles which can be delivered to intending users. There has, of course, been an enormous reduction of labor employed on productive work. On the other hand, there has been a colossal addition to the quantity of labor devoted to the manufacture of war material; and this war material is just as much a part of the total supply—the relationship of which to the total demand fixes prices—as are the products of the farm and the cotton mill. On the whole, supply has probably decreased very little; but an immense part of it now consists of material for destruction. If the volume of supply and the volume of demand remain approximately the same, the general level of prices need not be seriously affected by a material alteration of the ingredients of supply, provided that the direction in which demand is exercised be altered to meet the new conditions of supply. When it became clear

—as it did in Europe soon after the war broke out—that the available quantity of goods was no longer to consist almost entirely of articles of general use but was to be made up in part only of those goods and in part of material for military purposes, it ought to have been equally clear that what was wanted was not the creation of fresh purchasing power to correspond with the new supply of military material, but a very extensive transfer of purchasing power from personal to Government control. To create new money to pay for military material and to leave practically the whole of the purchasing power capable of being built up on the old currency to compete for the greatly reduced supply of goods available for public use could hardly fail to force up the prices of those goods in very much the same proportion as the supply of them had decreased.

The best possible indication of a State's prosperity and of its power to meet a sudden crisis is the excess of its citizens' incomes over the expenditure upon essential requirements. The greater that excess the better it is for the State, provided that the moral fibre of the people has not been softened by luxury to the extent of making them unwilling to undergo conditions of relative hardship which may become necessary if the nation be confronted with danger. A transformation of the world's supply of goods began in August, 1914. It was possible to leave the whole of the original purchasing power of the community to compete for the greatly reduced supply of goods, and to create, by means of paper money, entirely fresh purchasing power to defray the expenses of the war: under such conditions nothing could prevent general prices from soaring upwards. The diametrically opposite plan was for the Governments concerned arbitrarily to seize so much of all private incomes as exceeded the amount required to maintain a reasonable standard of living and to spend on armies and navies the money thus acquired: under such a plan the demand for goods available for the use of the general public would probably have been cut down to as great an extent as the supply of them, and there would have been no very marked rise of prices. What was actually done everywhere was to create enormous masses of fresh purchasing power based upon inconvertible paper money, to collect by taxation a small part only of excess individual incomes, and to appeal to the public to lend the remainder. But just as the voluntary system of enlisting men will achieve results

which are very good indeed but are yet not good enough for a war of great magnitude, so the voluntary system of self-denial will go a long way but perhaps not quite so far as is necessary. A member of the British Government hinted recently that if people did not purchase War Bonds steps might be taken to make them do so. Compulsion of this kind would find no more favor in England than in America; but there is nevertheless a great deal to be said for it. Everyone would be compelled to take up war loans in proportion to his income. The financial burden of the war would be adjusted to the capacity of individual shoulders. And—most important of all—purchasing power, instead of being allowed to compete wildly for goods of which the supply cannot be increased, would be automatically forced into such directions as would tend to equate the new demand to the new supply. General prices would certainly fall considerably.

WALTER F. FORD.